

**REMARKS**

Favorable reconsideration is respectfully requested in view of the foregoing amendments and the following remarks.

Applicants sincerely thank the Examiner and her supervisor for holding a telephonic interview with Applicants' representatives on January 9, 2008. The Examiner's and her supervisors' kind suggestions have been incorporated into this Reply.

**I. CLAIM STATUS AND AMENDMENTS**

Claims 1, 3-10, 12-21 and 23-33 were pending in this application when last examined.

Claims 1, 7-10 and 16-18 were examined on the merits and stand rejected.

Claims 3-6, 12-15, 19-21 and 23-33 are withdrawn as non-elected subject matter.

Claim 1 is amended to recite the limitation of claim 7 as filed. Further, claim 1 is amended to recite the administration of Futhan as the complement inhibitor. Support for this limitation can be found on page 35, second full paragraph, of the specification as filed.

Claim 8 is amended to depend on claim 1. Applicants note that claim 8 was dependent on claim 7 and the limitations of claim 7 have been incorporated into claim 1.

Claim 10 is amended to recite the limitations of original claim 16. Claim 10 is further amended to recite Futhan. Support for this amendment can be found as noted above and on page 39, line 10-15, of the specification as filed. Finally, claim 10 is amended to recite "proliferating the human hepatocytes into the liver of said mouse for not shorter than 50 days". Support for this limitation can be found on page 15, line 29, to page 16, line 4, of the specification as filed.

Claim 17 is amended to depend upon claim 10. Applicants note that claim 17 was dependent on claim 16, the limitations of which have been incorporated into claim 10.

Claims 7 and 16 are newly cancelled. Applicants reserve the right to file a divisional or continuation application on any cancelled subject matter.

Therefore, no new matter has been added.

## **II. INFORMATION DISCLOSURE STATEMENT**

In item 3 on page 2, the Examiner indicated that the IDS filed April 22, 2005, was not considered because the non-patent literature references were not enclosed. Accordingly, attached herewith is a copy of the 1449 form submitted April 22, 2005 with proof of prior submission in a copy of the postcard date-stamped by the Office and the above-mentioned references. The Examiner is respectfully requested to consider these references and return an initialed copy of the attached 1449 form with her next Office Action.

## **III. CLAIM OBJECTIONS**

In item 5 on pages 3-5 of the Office Action, claims 7 and 16 were objected to as not further limiting the claims from which they depend. These claims are canceled and therefore this objection is moot.

## **IV. ENABLEMENT REJECTION**

In item 7 on pages 6-12, claims 1, 7-10 and 16-18 were again rejected under 35 U.S.C. § 112, first paragraph, as not enabled.

Applicants respectfully traverse this rejection, as applied to the amended claims, for the following reasons.

Applicants note that the Examiner has indicated that the claimed method is enabled for the complement inhibitor Futhan. Applicants further note that the claims have been limited to such a complement inhibitor.

The Applicants further note that the Examiner indicated that the claimed invention was not enabled for non-proliferative hepatocytes. Applicants note that the claims have been amended to recite using proliferative hepatocytes.

Finally, Applicants note that the Examiner indicates that the claimed invention is not enabled for any immunodeficient hepatopathy mouse except for uPA-Tg/SCID immunodeficient hepatopathy mice comprising a homozygous insertion of a uPA-Tg into the genome of a homozygous SCID mouse. Applicants respectfully disagree.

The requirement for the mouse of this invention is "immunodeficiency" and "hepatopathy". Means were well known at the time of invention for providing these properties with mouse. Please see page 17, line 19 to page 20, line 18, of the specification as filed.

Further, the specification introduces the prior success of proliferation of human hepatocytes with uPA/Rag2 knockout mouse (see page 5, lines 3-12, of the specification as filed). The inventors of this application also succeed with the uPA/Rag2 KO mouse to proliferate human hepatocytes in a high replacement ratio with a survival for over 75 days. Please see the attached Declaration under 37 CFR § 1.132.

Finally, Applicants note that the claims, as amended, are now directed towards immunodeficient hepatopathy mice treated with Futhan.

Thus, Applicants contend that the claimed invention is fully enabled for the full scope of "immunodeficient hepatopathy mouse".

Applicants therefore suggest that this rejection is untenable, as applied to the amended claims, and should be withdrawn.

## **V. NEW MATTER REJECTION**

In item 8 on pages 12-14, claims 10 and 16-18 were newly rejected under 35 U.S.C. § 112, first paragraph, for containing new matter. Also, in item 10 on pages 14-15, claim 10 was newly rejected under 35 U.S.C. § 112, second paragraph, as indefinite for the new matter. Applicants note that the rejected phrase has been deleted from claim 10 and therefore this rejection is moot. Applicants further note that a person of skill in the art reading pages 15 and 16 of the specification would understand that feeding for not less than 50 days indicates that the

mouse should be kept alive for at least 50 days in order for the hepatocytes to proliferate and replace the endogenous hepatocytes to a significant degree.

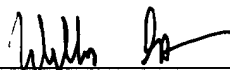
### CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is in condition for allowance and early notice to that effect is hereby requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact the undersigned attorney at the telephone number below.

Respectfully submitted,

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**ATTACHMENTS**

- A. Declaration Under 37 CFR § 1.132 by Chise Mukaidani dated February 1, 2008 with attached Figs. A-C (3 pages).
- B. Copy of date-stamped postcard for Supplemental IDS with Form PTO-1449 submitted April 22, 2005,
- C. Copy of form PTO-1449 submitted with Supplemental IDS on April 22, 2005, and
- D. Eight supplemental references:
  - J. L. Hecke et al., "Neonatal Bleeding in Transgenic Mice Expressing Urokinase-Type Plasminogen Activator", *Cell*, Vol. 62, pp. 447-456, August 10, 1990.
  - J. A. Rhim et al., "Replacement of Diseased Mouse Liver by Hepatic Cell Transplantation", *Science*, Vol. 263, pp. 1149-1152, February 25, 1994.
  - E. P. Sandgren et al., "Complete Hepatic Regeneration after Somatic Deletion of an Albumin-Plasminogen Activator Transgene", *Cell*, Vol. 66, pp. 245-256, July 26, 1991.
  - J. A. Rhim et al., "Complete Reconstitution of Mouse Liver with Xenogeneic Hepatocytes", *Proc. Natl. Acad. Sci., USA*, Vol. 92, pp. 4942-4946, May 1995.
  - M. Dandri et al., "Woodchuck Hepatocytes Remain Permissive for Hepadnavirus Infection and Mouse Liver Repopulation after Cryopreservation", *Hepatology*, Vol. 34, No. 4, pp. 824-833, 2001.
  - M. Dandri et al., "Repopulation of Mouse Liver with Human Hepatocytes and *In Vivo* Infection with Hepatitis B Virus", *Hepatology*, Vol. 33, No. 4, pp. 981-987, 2001.
  - J. Petersen et al., "Liver Repopulation with Xenogenic Hepatocytes in B and T Cell-Deficient Mice Leads to Chronic Hepadnavirus Infection and Clonal Growth of Hepatocellular Carcinoma", *Proc. Natl. Acad. Sci., USA*, Vol. 95, pp. 310-315, January 1998.
  - D. F. Mercer et al., "Hepatitis C Virus Replication in Mice with Chimeric Human Livers", *Nature Medicine*, Vol. 7, No. 8, pp. 927-932, August 2001.